

Purchase Order Receipt Listing

Tuesday, June 20, 2017 11:03:42 AM

All amounts are calculated in domestic currency.

All Vendors PO ID PO36688 Receipt Dates from 6/19/2017 to 6/19/2017 All Line Item Types

All Item ID/GL/WOs All Rec. Employees All Currencies

Grouped by Vendor ID

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M/ Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
Vendor ID/Vendor Name											
PO36688 TW Metals											
USD	1	No	M304TR0.500W.035 f		6/20/2017 48.0000	6/19/2017 PLOU01	40.0000		0.0000	0	\$0.00
			304 RD Tube .500 x .035W						0.0000	0	
			m137834								
	2	No	M304TR0.500W.049 f		6/20/2017 48.0000	6/19/2017 PLOU01	40.0000		0.0000	0	\$0.00
			304 RD Tube .500 x .049W						0.0000	0	
			m137834								
	3	No	M4130NT0.750W.04 f		6/20/2017 40.0000	6/19/2017 PLOU01	47.8340		0.0000	0	\$0.00
			9 4130 RD Tube .750 x.049W						0.0000	0	
			m137834								
	4	No	M2024T3T1.000W.06 f		6/20/2017 24.0000	6/19/2017 PLOU01	24.0000		0.0000	0	\$0.00
			5 2024T3 Tubing 1" OD x 0.65" Thick						0.0000	0	
			m137834								
	5	No	71900-90	Each	6/20/2017 20.0000	6/19/2017 PLOU01	19.3330		0.0000	0	\$0.00
			304 ROUND TUBING 0.500" X .049" WALL 1/8 HARD						0.0000	0	
			m137834								
	6	No	71401-45		6/20/2017 1.0000	6/19/2017 PLOU01	1.0000		0.0000	0	\$0.00
			PROCUREMENT QUALITY CLAUSES						0.0000	0	
			m137834								

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
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Total Received Quantity: 172.1670
 Total Qty to Inspect (PO U/M): 0.0000
 Total Reject Quantity: 0.0000
 Total Receipt Value: \$0.00
 Total Balance Due Quantity: 16.6670



O'Neal High-Performance Metals Group



**Packing
Slip**

ORDER NO.: 60633840

FROM: CRAN

PAGE 1

CUST NUMBER: 1203820 NET WGT: 39.424 REQ. DATE: 06/20/17 CONFIRMED
SOLD TO: SHIP TO:
DART AEROSPACE LTD DART AEROSPACE LTD
1270 ABERDEEN ST 1270 ABERDEEN ST
HAWKESBURY ON HAWKESBURY ON
CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 06/14/17
TERMS: NET 30 DAYS VIA: COMMON CARRIER
F.O.B.: SHIPPING POINT FREIGHT: PREPAID
CUST ORD NO.: PO36688 RELEASE NO.:
RECEIVING PHONE:

LINE ITEM DESCRIPTION WIDTH LENGTH
0001 36506 SMLS CD 304/L A269 1/2 OD X .049 WA 20' ML

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PCS
	40.000 FT	40.000 FT	40.000 FT	9.437	2

** 1 TEST REPORTS REQUIRED **

** 1 CERTS REQUIRED **

ECCN: 2B999.g Export License: NLR Expiration Date: 0/00/00
PO:49336439 HT:YX1506712 PC: 2 CUSTOMER QTY: UOM
MLT:CHINA MFG:CHINA SLB/CL:12-19

0002 33047 CDS 4130 6736 3/4 X .049 17/24 FT

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PCS
	40.000 FT	47.834 FT	47.834 FT	17.542	3

** 1 TEST REPORTS REQUIRED **

** 1 CERTS REQUIRED **

ECCN: 9A991.d Export License: NLR Expiration Date: 0/00/00
PO:49353474 HT:598618 PC: 3 CUSTOMER QTY: UOM
MLT:GERMANY MFG:GERMANY SLB/CL:1625993

0003 43260 D2024-T3 1 OD X .065 WA 12 FT ML

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT	PCS
	24.000 FT	24.000 FT	24.000 FT	5.495	2

** 1 TEST REPORTS REQUIRED **

** 1 CERTS REQUIRED **

ECCN: EAR99 Export License: NLR Expiration Date: 0/00/00
PO:49341478 HT:F002012480001 PC: 2 CUSTOMER QTY: UOM
MLT:UNITED STATES MFG:UNITED STATES SLB/CL:219348

217620

THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE
PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL
REVIEW.
<http://www.twmetals.com/invoice-terms.html>



O'Neal High-Performance Metals Group



Packing Slip

ORDER NO.: 60633840

FROM: CRAN

PAGE 2

CUST NUMBER: 1203820 NET WGT: 39.424 REQ.DATE: 06/20/17 CONFIRMED
 SOLD TO: SHIP TO:
 DART AEROSPACE LTD DART AEROSPACE LTD
 1270 ABERDEEN ST 1270 ABERDEEN ST
 HAWKESBURY ON HAWKESBURY ON
 CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 06/14/17
 TERMS: NET 30 DAYS VIA: COMMON CARRIER
 F.O.B.: SHIPPING POINT FREIGHT: PREPAID
 CUST ORD NO.: PO36688 RELEASE NO.:
 RECEIVING PHONE:

LINE	ITEM DESCRIPTION	WIDTH	LENGTH
0004	36476 SMLS CD 316/L A269 1/2 OD X .035 WA	20' ML	

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT
	40.000 FT	40.000 FT	40.000 FT	6.950

PCS
2

** 1 TEST REPORTS REQUIRED **

** 1 CERTS REQUIRED **

ECCN: 2B999.g Export License: NLR Expiration Date: 0/00/00
 PO:49336435 HT:YX1506597 PC: 2 CUSTOMER QTY: UOM
 MLT:CHINA MFG:CHINA SLB/CL:11-93

BROKERS KUEHNE AND NAGEL LTD

AREA	TYPE OF PKG	PKGS	GRS WEIGHT	WIDTH	LENGTH	HGHT
NEW PEN CARTON		1.000	98.000	4.0000	293.0000	4
	Box No -		TWPK17002270			
NEW PEN CARTON		1.000		4.0000	293.0000	4
	BOX NO -		TWPK17002264			
		2.000	98.000			

BY:
RT 000-

UNLOAD TYPE: NONE SPECIFIED

DATE SHIPPED

DATE FILLED

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ORDER NO.: 60633840

FROM: CRAN

PAGE 3

CUST NUMBER: 1203820	NET WGT:	39.424	REQ.DATE: 06/20/17	CONFIRMED
SOLD TO:		SHIP TO:		
DART AEROSPACE LTD		DART AEROSPACE LTD		
1270 ABERDEEN ST		1270 ABERDEEN ST		
HAWKESBURY ON		HAWKESBURY ON		
CANADA	CN K6A 1K7	ONTARIO CANADA		CN K6A 1K7

SALESPERSON:	DONNA SMALLEY	SHIP BY:	06/14/17
TERMS:	NET 30 DAYS	27 ENGLEHARD DRIVE	
F.O.B.:	SHIPPING POINT	MONROE TWP	NJ 08831
CUST ORD NO.:	PO36688		
VIA:	COMMON CARRIER		
FREIGHT:	PREPAID		
RELEASE NO.:			
RECEIVING PHONE:			

"TW Metals MSDS data is available on our web site at www.twmetals.com. MSDS data can be found under the Technical Resources Tab, Product Statistics & Data and the TW Metals MSDS's heading. If you do not have web site access you may telephone 610-458-1300 and we will mail or fax a copy of our current MSDS data to your location."

"CERTIFICATE OF CONFORMANCE"

"TW Metals certifies that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured, inspected, and tested in accordance with the material specification. These records are on file at TW Metals. Packaging material for shipments to Europe and China consists of manufactured wood products and complies with the European emergency measures for coniferous non-manufactured wood packing material"

Authorized Test Report Clerk Don Henry Date: 6/14/17

These commodities have been exported from the United States in accordance with the U.S. export control laws, export administrations regulations. Diversion contrary to U.S. law prohibited.

THANK YOU FOR THIS ORDER

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O'Neal High-Performance Metals Group



**Packing
Slip**

ORDER NO.: 70659916 FROM: ATLA PAGE 1

CUST NUMBER: 1203820 NET WGT: 4.561 REQ.DATE: 06/20/17 CONFIRMED
SOLD TO: SHIP TO:
DART AEROSPACE LTD DART AEROSPACE LTD
1270 ABERDEEN ST 1270 ABERDEEN ST
HAWKESBURY ON HAWKESBURY ON
CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 06/14/17
TERMS: NET 30 DAYS VIA: FED-EX GROUND
F.O.B.: SHIPPING POINT FREIGHT: PREPAID
CUST ORD NO.: PO36688 IT 5 RELEASE NO.:
RECEIVING PHONE:

LINE ITEM DESCRIPTION WIDTH LENGTH
0001 36510 SMLS CD 304 6845 1/8 HD 1/2 X .049 17/24 FT

CLN# ORD QTY INVOICE QTY SHIPPED QTY WT PCS
20.000 FT 19.333 FT 19.333 FT 4.561 1

** 1 TEST REPORTS REQUIRED **

** 1 CERTS REQUIRED **

ECCN: 9A991.d Export License: NLR Expiration Date: 0/00/00
PO:49367931 HT:543441 PC: 3 CUSTOMER QTY: UOM
MLT:SWEDEN MFG:UNITED STATES SLB/CL:61708

BROKERS KUEHNE AND NAGEL LTD
CUT INTO THIRDS TO SHIP

Sp 17-6-20

AREA		TYPE OF PKG	PKGS	GRS WEIGHT	WIDTH	LENGTH	HGHT
FED EX	CARTON		1.000	8.000	2.0000	84.0000	2
			1.000	8.000			

BY: JT
RT 000-

UNLOAD TYPE: NONE SPECIFIED

DATE SHIPPED _____

DATE FILLED _____

THANK YOU FOR THIS ORDER

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O'Neal High-Performance Metals Group



Packing
Slip

ORDER NO.: 70659916

FROM: ATLA

PAGE 2

CUST NUMBER: 1203820 NET WGT:

4.561 REQ.DATE: 06/20/17 CONFIRMED

SOLD TO:

SHIP TO:

DART AEROSPACE LTD

DART AEROSPACE LTD

1270 ABERDEEN ST

1270 ABERDEEN ST

HAWKESBURY ON

HAWKESBURY ON

CANADA

CN K6A 1K7

ONTARIO CANADA

CN K6A 1K7

SALESPERSON:

DONNA SMALLEY

SHIP BY:

06/14/17

TERMS:

NET 30 DAYS

175 TUBEWAY

F.O.B.:

SHIPPING POINT

FOREST PARK

GA 30297

CUST ORD NO.:

PO36688 IT 5

VIA:

FED-EX GROUND

FREIGHT:

PREPAID

RELEASE NO.:

RECEIVING PHONE:

"TW Metals MSDS data is available on our web site at www.twmetals.com. MSDS data can be found under the Technical Resources Tab, Product Statistics & Data and the TW Metals MSDS's heading. If you do not have web site access you may telephone 610-458-1300 and we will mail or fax a copy of our current MSDS data to your location."

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Authorized Test Report Clerk

Date: 6/14/17

These commodities have been exported from the United States in accordance with the U.S. export control laws, export administrations regulations. Diversion contrary to U.S. law prohibited.

1
THANK YOU FOR THIS ORDER

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TEST REPORT



416 DEPOT STREET
BRIDGEPORT, PA 19405

PH: (610) 279-7700
FAX: (610) 277-2005

ISO/IEC 17025
Materials Testing Laboratory

TMI Mill# 49917-6	TMI Lot# 61708	Customer PO. # M49367931	Quantity 483 fl
Sold to: TW Metals PO Box 644 760 Constitution Dr. Exton, PA, 19341		Type & Grade 304 Seamless	Size 0.5000" +/- 0.0030 OD 0.0490" +/- 10% Wall
<input checked="" type="checkbox"/> FAR TAA <input checked="" type="checkbox"/> DFARS BAA <input checked="" type="checkbox"/> FAR BAA		Specifications AMS-5566 Rev. M, MIL-T-6845 TYPE I 1/8 Hard Rev. D, AMS-T-6845 TYPE I 1/8 Hard Rev. B, DFARS Compliant, DFAR 252.225-7014	

Chemical Analysis (Wt %)

HEAT#: 543441

Melt Source / Analysis: SANDVIK, SWEDEN

C	Mn	P	S	Si	Cr	Ni	Mo	Cu	Fe	N
.017	1.60	.030	.011	.43	18.36	10.21	.29	.24	Bal	.035

Mechanical Properties

Tensile Strength
115,000 PSI
116,000 PSI

0.2% Offset Yield Strength
97,000 PSI
102,000 PSI

% Elongation
26
24

Hardness

TEST REPORTS
ACCEPTED BY

[Signature]
MAR 31 2017

49367931
TW METALS

Visual Passed
Grain Size ASTM# 7.5
Passivat PASSED
Flare PASSED > .656" - 74°
Profilometer OD RHR 22 / ID RHR 55
Loose Mt Check PASSED

Dimensional Passed
Bend PASSED
Embrittlement PASSED
Eddy Current PASSED 10% Notch Level
Hydrostatic PASSED 16,200 PSI
Surface PASSED

LEAK TEST - PASSED

I certify that this is correct and conforms to above specifications.

Nicholas Ricci, Plant Metallurgist 04/27/2016 Page 1 of 1

The test report shall not be reproduced except in full, without the written approval of the laboratory. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punished as a felony under federal law.

MILL TEST REPORT

Purchaser.: TW METALS-Carol Stream				Certificate No.: 16-1-92					
Contract No.: TWM P.O.No.: M49336439				Date of Issue.: 2016.1.5					
Commodity: Stainless Steel Seamless Tubes		Specifications: ASTM A213-15c/ASME SA213-15/ASTM A269-15a EAW							
Process: Cold Drawn				Delivery Condition: OD Polished to 240 Grit					
Steel Grade	Heat Number	Lot Number	Dimensions		Quantity				
					Pieces	Feet			
TP304/TP304L	YX1506-7129-89	12-19	1/2" x 0.049" x 20'		2300	46,000			
Chemical Composition by Weight (%)									
Element	C	Mn	P	S	Si	Cr	Ni	Mo	Co
Requirements	≤0.035	≤2.00	≤0.045	≤0.030	≤1.00	18.00-20.00	8.00-12.00	-	-
Ladle Analysis	0.013	0.65	0.032	0.002	0.32	18.28	8.05	-	-
Product Analysis	0.017	0.61	0.033	0.002	0.28	18.31	8.55	-	-
Mechanical Properties									
Test Item	Elongation (% in 2")		Tensile Strength (PSI) Rm		Yield Strength (PSI) Rp / 0.2%				
Requirements	≥35		≥75,000		≥30,000				
Test Results	63/64		97,000/98,000		43,000/44,000				
Test Item	Reduction of Area Z (%)	Hardness	Cold Bend Test	Flaring Test	Flattening Test	Flange Test	P.M.I. Test		
Requirements	-	HRB≤80	-	22%	e=0.09	-	-		
Test Results	-	77/79	-	Passed	Passed	-	OK		
Test Item	Eddy Current Test	Air Underwater Pressure Test	Ultrasonic Test	Intergranular Corrosion Test	Macroscopic Inspection				
Requirements	ASTM E 426	-	-	ASTM A262 E	End Cut	Appearance			
Test Results	Passed	-	-	OK	OK	OK			

ISO 9001:2008 Certified by Intertek 110703068

PED Certified by SZUTEST 2195-PED-1526002

Additional Remarks:

- (1) All tubes annealed to above 1900 Deg F and water quenched below 800 Deg F in 3 minutes
- (2) All tubes tested per ASTM A1016-14
- (3) Materials is NACE MR0103-2007 compliant (per Section 2.5)
- (4) Materials is NACE MR0175/ISO 15156-2003 compliant (per Section 4.2.1)
- (5) In Compliance with EN 10204-3.1
- (6) In Compliance with RoHS Stipulation
- (7) No weld repair performed
- (8) Free from mercury contamination
- (9) Free from radioactive contamination
- (10) Billets melt and pipes/tubes manufactured in China
- (11) All tubes 100% PMI tested
- (12) All tubes 100% Eddy Current tested

**CANNOT CERTIFY COMPLIANCE
FAR BAA / DFARS BAA / FAR TAA**



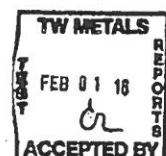
By:

James Shi

James Shi / Manager
Quality Control Department

We hereby certify that this report is true and correct.

Shanghai Pufa Stainless Steel Pipe Factory
No. 59, Shuangye Road, Wanggang, New Pudong District, Shanghai, China



C

Benteler Steel/Tube GmbH
Postfach 13 40
33043 Paderborn
Deutschland
Tel.: +49.5254.81-0 Fax: +49.5254.13666

BENTELER

Steel/Tube

ABNAHMEPRÜFZEUGNIS EN 10204-3.1

INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1

EN 10204:2005-01

Benteler Steel/Tube GmbH - Postfach 1340 - 33043 Paderborn - Deutschland

TW Metals

The Aboretum, Suite 204
760 Constitution Drive
EXTON PA 19341
USA

Dokument-Nr.: 41-961797/001/P

Document No.:
No. du document:

Kunden-Bestell-Nr.: 46004384 TW M49353474

Purchase Order No.:
No. de commande du client:

Benteler Auftrags-Nr.: 1625993

Benteler Order No.:
No. de commande Benteler:

Versandanzzeigen-Nr.: 4170922
Dispatch Note No.:
No. d'avis d'expédition:

Produkt: NAHTLOSE STAHLROHRE
Product: SEAMLESS STEEL TUBES
Produit: TUBES D'ACIER SANS SOUDURE

Stahlschmelzungsverfahren: ELEKTROSTAHL
Steelmaking process: ELECTRIC FURNACE
Procédé d'élaboration de l'acier: FOUR ELECTRIQUE

Stempel des Abnahmebeauftragten: WA
Stamp of the inspection representative:
Poinçon du contrôleur:

Hersteller: Warmrohrwerk/Zieherlei
Manufacturer: IDIN EN ISO 9001, ISO/TS-16949 CERTIFIED BY TUV NORD CERT
Producteur: [PED 2014/68/EU CERTIFIED BY TUV NORD SYSTEMS]

Herstellerzeichen:
Manufacturer's brand:
Marque du producteur:

Prüf-Nr.:
Inspection No.:
No. du certificat:

Blatt: 1 / 4
Page:
Page:

Lieferbedingungen: AMS-T-6736B Type 1, ASTM-A 519-2006, MIL-T-6736B Type 1, AMS6360 Rev. M, AMS 2301K

Terms of delivery:

Conditions de livraison:

Maße - Toleranzen:

Dimensions-tolerances:

Dimensions-tolérances:

Stahlsorte:

Steel grade:

Nuance d'acier:

Lieferzustand:

Delivery condition:

État de livraison:

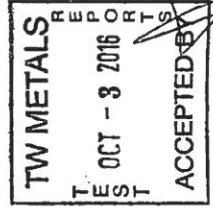
Produktkennzeichnung:

Product marking:

Marquage du produit:

FSD: BENTELER AMS6360M-AMS-T-6736 B 1-MIL-T-6736 B 1-AMS 2301K 4130 Condition N HEAT-NO.

CD AQ S DIMENSIONS WA GERMANY



AEZ = Ätzlinienbeschriftung, Etching ink marking, gravure à l'encre . FK = Farbkennzeichnung, color marking, marquage par couleur . FS = Farbschablonierung, paint stenciling, marquage par peinture . FSD = Farbstrahlendrucker, Color jet printer, imprimante à jet d'encre de couleur . LK = Laserkennzeichnung, Laser marking, Marquage laser . PKE = Etikettenkennzeichnung, tag marking, marquage sur étiquette . PS = Prägestempel, die stamp, marquage par poinçonnage . TS = Tintenstrahlkennzeichnung, ink jet spray marking, imprimante à jet d'encre .

Benteler Steel/Tube GmbH
Postfach 13 40
33043 Paderborn
Deutschland
Tel.: +49.5254.81-0 Fax: +49.5254.13866

BENTELER

Steel/Tube

ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1

Dokument-Nr.: 41-961797/001/P
Document No.:
No. du document:

Prüf-Nr.:
Inspection No.:
No. du certificat:

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Page:
Page:

Pos.	Stück	Maße	Gesamtlänge	Gewicht	Schmelzen-Nr.	Prüfdruck	Rohr-Nr.-Gruppe	Vielfachlängen
Item	Number	Dimensions	Length total	Weight	Heat No.	Test pressure	Tube number group	Multiple lengths
Poste	Nombre	Dimensions	Longueur totale	Poids	No. de coulée	Pression d'épreuve	Série de no. des tubes	Longueurs multiples
		feet	feet	lbs				
0003	154	0.750" O.D. * 0.049" WT 20 FT - 24 FT	3688,32	1345	598618			

DAS
39
9-89

Schmelzenanalyse [%] / Heat analysis [%] / Analyse sur coulée [%]

Pos.	Schmelzen-Nr.	C	SI	MN	P	S	CR	MO	NI	CU
Item	Heat No.									
Poste	No. de coulée									
0003	598618	0,310	0,260	0,54	0,010	0,001	0,88	0,17	0,14	0,17

Produktanalyse [%] / Product analysis [%] / Analyse sur produit [%]

Pos.	Schmelzen-Nr.	C	SI	MN	P	S	CR	MO	NI	CU
Item	Heat No.									
Poste	No. de coulée									
0003	598618	0,310	0,280	0,52	0,009	0,001	0,89	0,17	0,12	0,15

Prüfergebnisse / Test results / Résultats des essais

Die Rohre wurden zerstörungsfrei geprüft:
The tubes are non destructive tested:
Les tubes ont passé un essai non destructif:

ET-test: acc. to ASTM-A 450; ET - Test method: acc. to ASTM-E 309; for imperfections; PASSED
ET-test: ET with rotating pancake coils; according to EN 10246-3; imperfections;
Notch depth: 0,30 mm; notch width < = notch depth; notch length min. 2 x transducer width (max. 50 mm)

Augensichtkontrolle:	PASSED	Materialverwechslungsprüfung:	PASSED	Maßkontrolle:	PASSED
Visual inspection:		Material conformity test:		Dimensions examination:	
Examen visuel:		Vérification de la nuance:		Vérification des dimensions:	

Ergebnisse der mechanischen Prüfung / Results of mechanical testing / Résultats des essais mécaniques

Die Probenahme erfolgte an Vielfachlängen.
The sampling was carried out on multiple lengths.
L'échantillonnage était réalisé aux longueurs multiples.

ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1

Dokument-Nr.: 41-961797/001/P
Document No.:
No. du document:

Zugversuch längs bei RT; Vollprobe / Tensile test longitudinal at RT, Full section test specimen / Essai de traction longitudinale à TA, Eprouvette a section complete

Pos.	Proben-Nr.	Schmelz-Nr.	Probenabmessung	Streckgrenze	Zugfestigkeit	Dehnung
Item	Specimen No.	Heat No.	Specimen dimensions	Yield strength	Tensile strength	Elongation
Poste	No. de l'éprouv.	No. de coulée	Dimensions de l'éprouv.	Limite élastique	Résistance à la traction	Allongement
Anforderungen						
			mm	Rp 0,2 %	Rm	A2"
Requirements				KSI	KSI	%
Exigences				MIN 75	MIN 95	MIN 12.00
0003	000001	598618	19,05 X	1,25	120	128
0003	000002	598618	19,05 X	1,25	120	128
0003	000003	598618	19,05 X	1,25	118	127
0003	000004	598618	19,05 X	1,25	120	128
0003	000005	598618	19,05 X	1,25	118	128

Randentkohlung / Surface decarburization / Décarburation superficielle

Pos. / Item / Poste: 0003

acc. to AMS-6360, partial decarburization outside max. 0.009 in, partial decarburization inside max. 0.009 in, partial decarburization outside and inside max. 0.012 in, partial decarburization outside and inside max. 0.305 mm, without total decarburization; partial decarb. out. max.: 0,229 mm; partial decarb. ins. max.: 0,229 mm

Vermerk / Remark / Remarque

Pos. / Item / Poste: 0003

Certificate remarks: The steel grade corresponds to MIL-T-6736B, AMS 6360M, material free from mercury contamination, FAR BAA: 52.225-1 CANNOT COMPLY, DFARS BAA: 252.225-7001 CAN COMPLY, FAR TAA: 52.225-5 CAN COMPLY, No weld repair has been carried out, Country of origin of the material and heat: Germany, Aircraft quality steel acc. to AMS 2301K; see appendix page 1 of 1

Pos. / Item / Poste: 0003

Macroscopic examination: acc. to ASTM-E 381

Pos. / Item / Poste: 0003

Magnetic particle inspection: acc. to AMS 2301K/ASTM-E 1444, on prematerial

Pos. / Item / Poste: 0003

Grain size: acc. to ASTM-E 112; Grain size and finer: 5; Grain size: Longitudinal structure microscopy, On prematerial

Verkäufer(in) / Sales Personnel / Personne chargée : Mr Schwarz, Tel.: 05254 81-204311, Fax: 204391

Benteler Steel/Tube GmbH
Postfach 13 40
33043 Paderborn
Deutschland
Tel.: +49.5254.81-0 Fax: +49.5254.13666

BENTELER 
Steel/Tube

ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1

Dokument-Nr.:
Document No.:
No. du document: 41-961797/001/P

Prüf-Nr.:
Inspection No.:
No. du certificat:

Blatt: 4 / 4
Page:
Page:

Paderborn Schloß Neuhaus, 19.09.2016, TEL.: 05254.81-201765 FAX: 05254.81-201752

Abnahmebeauftragter
Inspection representative
Contrôleur

i.A. THOMAS GOLLAN / GUT

Es wird bestätigt, daß die gelieferten Erzeugnisse den techn. Lieferbedingungen des Auftrages entsprechen. Dieses Dokument wurde mittels EDV erstellt und ist ohne Unterschrift rechtsgültig.
We certify that the supplied products comply with the order specification. This document was prepared by means of electronic data processing and is valid without signature.
Nous attestons que les produits livrés sont conformes aux stipulations de la commande. Ce document a été établi par traitement électronique de l'information et est valide sans signature.

Thomas Gollan

KAISER ALUMINUM FABRICATED PRODUCTS

Best in Class

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
6573 W. WILLIS ROAD
CHANDLER, AZ 85226

CUSTOMER PO NUMBER: M49341478-1		CUSTOMER PART NUMBER: 43260		PRODUCT DESCRIPTION: Drawn Seamless Tube/Pipe	
KAISER ORDER NUMBER: 219348	LINE ITEM: 001	SHIP DATE: 11/02/2015	KAISER LOT NUMBER: F00201248 9-89	ALLOY: 2024	TEMPER: T3
WEIGHT SHIPPED: 379.000 LB	QUANTITY: 138.000 PCS	B/L NUMBER: 220262	DIAM/DAF/THKNS:	WIDTH:	LENGTH: 12.000 FT
SHIP TO: TW METALS INC 27 ENGLEHARD DRIVE EXIT 8A OFF NJ TPK MONROE TWP, NJ 08831 USA			SOLD TO: TW METALS INC 760 CONSTITUTION DRIVE SUITE 204 EXTON, PA 19341 USA		

Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CON%IACS	BEND
F00201248	0001	1	69.9	50.0	22.5	N/A	N/A	N/A

Chemical Composition (wt%), Aluminum Remainder

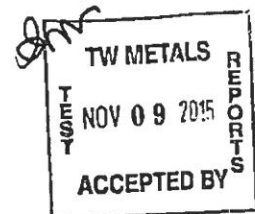
LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.50	0.50	4.90	0.90	1.80	0.10	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.00	0.00	3.80	0.30	1.20	0.00	0.00	0.00	NA	NA	NA	0.00	0.00
D82179	.10	.14	4.60	.72	1.36	.01	.05	.02	.00	.00	.01	.05	.06

Applicable Requirements:

Description: OD: 1.0000"; Wall: 0.0650"; Round @
AMS-4088K AMS-WW-T-700/3A ASTM B210-12
This Product Complies to FAR BAA, DFARS BAA, FAR TAA
COMPLIES TO DIN EN 10204 JAN 2005
No Weld Repair. Mercury Free.

Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA
MATERIAL COMPLIES WITH FAR BAA (FAR 52.225-1, BUY AMERICAN ACT- SUPPLIES), DFARS BAA
(DFARS 252.225-7001 BUY AMERICAN ACT & BAL OF PAYMENTS PROG), AND FAR TAA (FAR 52.225-5
TRADE AGREEMENTS).



Plant Serial: 00020683
Kaiser Order Number: 219348
Line Item: 001

KAISER
ALUMINUM
FABRICATED PRODUCTS

Best in Class

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
6573 W. WILLIS ROAD
CHANDLER, AZ 85226

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC ('Kaiser') hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms & conditions of sale. Test reports are on file subject to examination.

Nathaniel Stevens, Quality Manager



MILL TEST REPORT

Purchaser.: TW METALS-Cranbury				Certificate No.: 16-1-10					
Contract No.: TWM P.O.No.: M49336435				Date of Issue.: 2016.1.5					
Commodity: Stainless Steel Seamless Tubes				Specifications: ASTM A213-15c/ASME SA213-15/ASTM A269-15a EAW					
Process: Cold Drawn				Delivery Condition: OD Polished to 240 Grit					
Steel Grade	Heat Number	Lot Number	Dimensions	Quantity					
				Pieces	Feet				
TP316/TP316L	YX1506-597	11-93	1/2" x 0.035" x 20"	500	10,000				
Chemical Composition by Weight (%)									
Element	C	Mn	P	S	Si	Cr	Ni	Mo	Co
Requirements	≤0.035	≤2.00	≤0.045	≤0.030	≤1.00	16.00-18.00	10.00-14.00	2.0-3.0	-
Ladle Analysis	0.016	0.63	0.027	0.003	0.31	16.69	10.05	2.02	-
Product Analysis	0.016	0.61	0.032	0.007	0.34	16.67	10.35	2.03	-
Mechanical Properties									
Test Item	Elongation (% in 2")		Tensile Strength (PSI) Rm			Yield Strength (PSI) Rp / 0.2%			
Requirements	≥35		≥75,000			≥30,000			
Test Results	63/64		88,000/89,000			41,000/42,000			
Test Item	Reduction of Area Z (%)	Hardness	Cold Bend Test	Flaring Test	Flattening Test	Flange Test	P.M.I. Test		
Requirements	-	HRB≤80	-	22%	e=0.09	-	-		
Test Results	-	76/78	-	Passed	Passed	-	OK		
Test Item	Eddy Current Test	Air Underwater Pressure Test	Ultrasonic Test	Intergranular Corrosion Test	Macroscopic Inspection				
Requirements	ASTM E 426	-	-	ASTM A262 E	End Cut	Appearance			
Test Results	Passed	-	-	OK	OK	OK			

ISO 9001:2008 Certified by Intertek 110703068

PED Certified by SZUTEST 2195-PED-1526002

Additional Remarks:

- (1) All tubes annealed to above 1900 Deg F and water quenched below 800 Deg F in 3 minutes
- (2) All tubes tested per ASTM A1016-14
- (3) Materials is NACE MR0103-2007 compliant (per Section 2.5)
- (4) Materials is NACE MR0175/ISO 15156-2003 compliant (per Section 4.2.1)
- (5) In Compliance with EN 10204-3.1
- (6) In Compliance with RoHS Stipulation
- (7) No weld repair performed
- (8) Free from mercury contamination
- (9) Free from radioactive contamination
- (10) Billets melt and pipes/tubes manufactured in China
- (11) All tubes 100% PMI tested
- (12) All tubes 100% Eddy Current tested

**CANNOT CERTIFY COMPLIANCE
FAR BAA / DFARS BAA / FAR TAA**

By:



James Shi

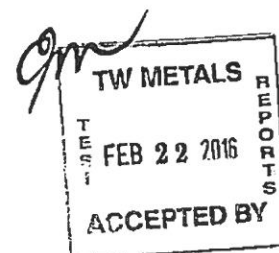
James Shi / Manager

Quality Control Department

We hereby certify that this report is true and correct.

Shanghai Pufa Stainless Steel Pipe Factory

No. 59, Shuangye Road, Wanggang, New Pudong District, Shanghai, China



MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304TR0.500W.035
 DATE: JUN 20 2017

PO / BATCH NO.: 036688/M137834

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 40'
 QUANTITY INSPECTED: 40'
 QUANTITY REJECTED: 0

THICKNESS ORDERED: W.035
 THICKNESS RECEIVED: W.032
 SHEET SIZE ORDERED:
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y N	
CORROSION	Y <input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y N	<u>Astm A213</u>
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y N	<u>HT# YX1506712</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 39</u> DATE: <u>9-89 JUN 20 2017</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS SEAMLESS ROUND TUBING
 SPECIFICATION: ASTM A213 OR ASME SA213 OR ASTM A289

WALL THICKNESS TOLERANCE PER ASTM A289 AS FOLLOWS:

OD (IN)	PERMISSIBLE OD TOL. (IN)	PERMISSIBLE WALL TOL.
UP TO 1/2	±0.005	±15%
1/2 TO 1 1/2, EXCL.	±0.005	±10%
1 1/2 TO 3 1/2, EXCL.	±0.010	±10%
3 1/2 TO 5 1/2, EXCL.	±0.015	±10%
5 1/2 TO 8, EXCL.	±0.030	±10%

PART NUMBER: M304TR/D DDD/W/TTT
 OD WALL

WHERE "D DDD" = OUTSIDE DIAMETER IN INCHES
 AND "TTT" = WALL THICKNESS IN INCHES
 EG. 0.375" OD X 0.065" WALL TUBING = M304TR/D.375W.065

RELEASED
 18/08/23

B	RECOMAT DNG. ADD SPECS (ZN D8-1).	CP	08.10.20
A	REF PART 08.02.00	DS	01.06.08
REV.	NEW ISSUE	BY	DATE
DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		M304TR	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		304/316 ROUND TUBING	NTS
DATE	08.10.20	COPYRIGHT © 2001 BY DART AEROSPACE LTD	

THIS DOCUMENT IS UNCLASSIFIED AND CONTAINS NO INFORMATION OF INTEREST TO THE NATIONAL DEFENCE. IT IS RELEASED UNDER THE ACCESS TO INFORMATION ACT.

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M4130NTO.750W.049
 DATE: JUN 20 2017

PO / BATCH NO.: PO36688/M137834

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 47'
 QUANTITY INSPECTED: 47'
 QUANTITY REJECTED: 0

THICKNESS ORDERED: W.049
 THICKNESS RECEIVED: W.049
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	N	
CORROSION	Y	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/>	N	Am.56360
CORRECT THICKNESS	<input checked="" type="checkbox"/>	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	N	AT #598618
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>39</u> <u>9-89</u>	SIGNED OFF BY: _____
DATE: <u>JUN 20 2017</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 4130N SEAMLESS STEEL TUBING
 SPECIFICATION: MIL-T-6736 OR AMS 6330, 6360, 6361, 6362, 6373, 6374
 PART NUMBER: M4130N/TD DDD/W.TTT WHERE: "D.DDD" = OUTER DIAMETER (IN INCHES)
 AND "T.TT" = WALL THICKNESS (IN INCHES)
 DIA. WALL

EG. 3/4" TUBING WITH .035" WALL = M4130NT0.750W.035

REV	DESCRIPTION	BY	DATE
B	REFORMAT DWG TO ACCOMMODATE ADDITIONAL TUBE DIAMETERS AND WALL THICKNESS	RP	12.04.02
A	NEW ISSUE	JB	01.05.16
DESIGN	JB		
DRAWN	RP		
CHECKED	AP		
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	12.04.02		

DART AEROSPACE LTD
 HAWKESBURY, ONTARIO, CANADA
 DRAWING NO. M4130N-T
 TITLE: STEEL TUBING
 REV. B
 SHEET 1 OF 1
 SCALE
 NTS

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RELEASED
 IN 2012-04-16
 AM

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304+R0500W049

PO / BATCH NO.: 036688/M137834

DATE: JUN 20 2017

MATERIAL CERT REC'D: yes

THICKNESS ORDERED: W.049

QUANTITY RECEIVED: 40'

THICKNESS RECEIVED: W.046

QUANTITY INSPECTED: 40'

SHEET SIZE ORDERED: N/A

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	N	
CORROSION	Y	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/>	N	ASTM A213
CORRECT THICKNESS	<input checked="" type="checkbox"/>	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	N	44# YX1506597
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DAS 39</u> DATE: <u>9-89 JUN 20 2017</u>	SIGNED OFF BY: _____ DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS SEAMLESS ROUND TUBING

SPECIFICATION:

ASTM A213 OR ASME SA213 OR ASTM A289

WALL THICKNESS TOLERANCE PER ASTM A289 AS FOLLOWS:

OD (IN)	PERMISSIBLE OD TOL. (IN)	PERMISSIBLE WALL TOL.
UP TO 1/2	±0.005	±15%
1/2 TO 1 1/2, EXCL.	±0.005	±10%
1 1/2 TO 3 1/2, EXCL.	±0.010	±10%
3 1/2 TO 5 1/2, EXCL.	±0.015	±10%
5 1/2 TO 8, EXCL.	±0.030	±10%

PART NUMBER: M304TR/D DDD W/TTT
OD WALL

WHERE "D, DDD" = OUTSIDE DIAMETER IN INCHES
AND "TTT" = WALL THICKNESS IN INCHES
EG. 0.375" OD X 0.065" WALL TUBING = M304TR/D, 375W, 065

RELEASED
09/08/23
MJD

B	REFORMAT DWG. ADD SPECS (ZN DB-1).	CP	08.10.20
A	NEW ISSUE	DS	01.06.08
REV	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR			
APPROVED			
DATE	08.10.20		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M304TR			
TITLE 304/316 ROUND TUBING			
REV. B			
SHEET 1 OF 1			
SCALE NTS			
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ALL RIGHTS RESERVED. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD.			

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M202473+1,000W.CCS
 DATE: JUN 20 2017

PO / BATCH NO.: 0036688/137834

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 24'
 QUANTITY INSPECTED: 24'
 QUANTITY REJECTED: 0

THICKNESS ORDERED: W.O.S
 THICKNESS RECEIVED: W.O.S
 SHEET SIZE ORDERED: NA
 SHEET SIZE RECEIVED: NA

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	44-#F00201248
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>DAS 39</u>	SIGNED OFF BY: _____		
DATE: <u>9-89 JUN 20 2017</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36688**

Purchase Order Date 6/13/2017

PO Print Date 6/14/2017

Page Number 1 of 3

Order From :
TW METALS
PO BOX 933014
ALTANTA, GA 31193-3014
US

VU-TWM001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED
JUN 13 2017

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	585 768 5600	Customer POID	
		Customer Tax #	10127-2607
Ship To Contact		Terms	Net 30
Ship To Phone		Currency	USD
Ship Via:	YRC COLLECT	FOB	FCA - (Free Carrier)
Ship Acct:			

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	M304TR0.500W.035	304 RD Tube .500 x .035W	6/20/2017 Yes 6/20/2017		48.00 f	\$1.50	\$72.00 60.00
MATERIAL: AISI 304/316 SA SEAMLESS ROUND TUBING AS PER ASTM A213 OR AMSE SA213 OR ASTM A269							
Line Total:							\$72.00
2	M304TR0.500W.049	304 RD Tube .500 x .049W	6/20/2017 Yes 6/20/2017		48.00 f	\$2.80	\$134.40 112.00
MATERIAL: AISI 304/316 SA SEAMLESS ROUND TUBING AS PER ASTM A213 OR AMSE SA213 OR ASTM A269							
Line Total:							\$134.40

Note:

6/14/2017



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36688**

Purchase Order Date 6/13/2017

PO Print Date 6/14/2017

Page Number 2 of 3

Order From :

TW METALS
PO BOX 933014
ALTANTA, GA 31193-3014
US

VU-TWM001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 585 768 5600

Ship To Contact

Ship To Phone

Ship Via: YRC COLLECT

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

3	M4130NT0.750W.049	4130 RD Tube .750 x.049W	6/20/2017	40.00	Yes 6/20/2017	\$6.00	\$240.00
MATERIAL: AISI 4130N SEAMLESS STEEL TUBING AS PER MIL-T-6736 OR AMS 6371/6360/6361 6362/6373/6374							287.00
Line Total:							\$240.00
4	M2024T3T1.000W.065	2024T3 Tubing 1" OD x 0.65" Thick	6/20/2017	24.00	Yes 6/20/2017	\$7.50	\$180.00
AS PER MATERIAL 2024-T3 ROUND TUBING, MAT'L SPEC'S AMS-QQ-A-250/4							176.64
Line Total:							\$180.00
5	71900-90	304 ROUND TUBING 0.500" X .049" WALL 1/8 HARD	6/20/2017	20.00	Yes 6/20/2017	\$11.50	\$230.00
AS PER AMS 5566 SEAMLESS							140.84
Line Total:							\$230.00

Note:

6/14/2017



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36688**

Purchase Order Date 6/13/2017

PO Print Date 6/14/2017

Page Number 3 of 3

Order From :

VU-TWM001

Ship To :

DART AEROSPACE LTD

TW METALS
PO BOX 933014
ALTANTA, GA 31193-3014
US

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

585 768 5600

Ship To Contact

Ship To Phone

Ship Via:

YRC COLLECT

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

Deliver To: nazim

6 71401-45

PROCUREMENT
QUALITY CLAUSES

6/20/2017

1.00

\$0.00

\$0.00

No

6/20/2017

Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

Line Total:

\$230.00

Line Total:

\$0.00

PO Total:

\$856.40

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 3

Change Date: 6/14/2017